

the RARS

Exciter

Raleigh Amateur Radio Society



Worldwide Friendship

September, 2001
Number 371



Things Are Looking Up at Bayleaf...

The Exciter

The **Exciter** is the monthly newsletter of the Raleigh Amateur Radio Society. It is available in both printed and electronic form. The printed version is mailed to members just before each club meeting. The electronic form, in Adobe Acrobat PDF format, is e-mailed about a week earlier.

We solicit both articles and advertising. The deadline for submissions is the 15th of the prior month. Contact the Editor.

The views contained in the Exciter are those of the individual authors, and are not necessarily the views of the Editor, or the Raleigh Amateur Radio Society.

The Raleigh Amateur Radio Society

The Raleigh Amateur Radio Society, Inc. (RARS) was founded in 1969 and continues to serve and support the Amateur Radio community in the greater Triangle area. In 1999, we incorporated a new RARS, and obtained 501(c)(3) Non-Profit tax status.

The objectives of the club are to promote worldwide friendship through Amateur Radio; to be of public service by providing radio communications in times of disaster, emergency, or civic need; to educate members in radio technique; and to provide training classes to assist in obtaining Amateur Radio licenses.

Anyone interested in Amateur Radio is eligible to apply for membership. Dues for regular licensed amateurs are \$18.00 per year (from July 1 through June 30). Additional immediate family members pay \$5.00 each per year. Dues for licensed amateurs older than 59 or younger than 16 are \$12.00 per year. Dues for non-licensed Associate members are \$9.00 per year.

Applications for membership may be obtained from the treasurer, or the RARS web site (www.rars.org).

Officers

President **Tim Nicholson KF4RTX**
501-7746
kf4rtx@arrl.net

Vice-President **Bob Breyer K1RCB**
848-7761
breyer@ix.netcom.com

Secretary **Jeff Wittich AC4ZO**
362-9456
ac4zo@arrl.net

Treasurer **Greg Seamster KE4PAX**
859-0029
ke4pax@arrl.net

Exciter Editor **Gary Pearce KN4AQ**
380-9944
kn4aq@arrl.net

Exciter Associate Editor **Karl Ulrich K4LNX**
k4lnx@arrl.net

Info

Repeaters:

145.13
146.64
224.64
444.525 (88.5 PL)

Web Site:

<http://www.rars.org>



President's Corner

Tim Nicholson KF4RTX

I just took an opportunity to page through the latest edition of QST. The "It seems to us..." section immediately caught my eye with the headline Antenna Restrictions. As most of you know, I was recently asked by the HOA of my community to take down my dipole after almost a year of having it up. I have since kept my eyes open for news regarding CC&R's and antenna restrictions.



Basically, the ARRL has just about given up on trying to persuade the FCC to protect amateur antennas in the same way that satellite dishes are protected. Instead, the League has decided to approach the problem from the Congress angle. The FCC will have to act if instructed to do so by Congress. If dad won't give you the answer you want, go ask mom.

But will this tactic work? Will Congress lend ham radio an ear? Personally, I doubt it. Even our friends in Congress have not been open to legislation that affects favored interest groups like real estate developers. It's hard to fight a battle like this without money and clout. Unfortunately, I don't think we have enough of either. But that doesn't mean we should just give up. We can at least make sure our legislators know how we feel about the subject.

On the home front, I'm happy to report that the MS-150 and other public service events are steaming forward. Also on the home front, our new repeaters are slowly coming along. I want to take time to thank Bernard W4BRB, Gary KN4AQ, Danny K4ITL, and all the other folks who are working hard this project. Despite some unforeseen technical difficulties, they seem to have everything well in hand. Keep up the good work!

73!

Tim, KF4RTX

Tune In The RARS NEWS HOUR

• **Newsline**
• **ARRL Audio News**
• **R.A.I.N Report**

**Sunday Nights following the
RARS 8:00 Net on 146.64**

The Hybrid Gas-Electric Car

Max Bloodworth KO4TV

One of our better-known RARS members, who, because of his innate modesty will remain unnamed, recently purchased a new vehicle with "Cutting Edge" technology: a Hybrid Gas-Electric 2001 model car. But how new is this "Cutting Edge" vehicle? History tells us that the first Gas-Electric Hybrid was built in 1897 by the prolific advocate of electric power, Justus B. Entz. Unfortunately, his co-inventor, Hiram P. Maxim W1AW, of Ham Radio fame, got his foot tangled in the wiring, causing a spark which ignited the gasoline and destroyed the prototype vehicle. Not to be outdone, Entz went on to develop the "Magnetic Transmission", which was basically a hybrid gasoline-electric system that was used in the Mercer (1912), the Owen Magnetic (1914-1922), the Knight (1917), the Deering Magnetic (1918-19), and, in a greatly enlarged version, the Battleship New Mexico. An article on the Owen Magnetic Hybrid vehicle appeared in a 1914 edition of



Here's the better-known RARS member in his new Honda Insight

Popular Mechanics Magazine. In addition, our old friend Hiram P. Maxim followed in the footsteps of his inventor father, Sir Hiram W. Maxim (inventor of the machine gun, gun

silencer and automobile muffler), and designed the Pope-Co-



lumbia electric in 1899 and the Ivanhoe electric in 1903, which was built in Toronto, Ont., and used a Westinghouse electric motor. Although most of these vehicles were not dual power, i.e. battery and electric, the Owen Magnetic was indeed a true hybrid, with a gasoline motor driving a generator to charge the batteries, which operated a motor to drive the wheels. Interestingly enough, the specifications for the 1914 vehicle claimed a top speed of 25 to 30 miles per hour, and a fuel economy of up to 30 miles per gallon, which was pretty good for this day and time. So, while the current application is relatively new, the Hybrid vehicle actually dates back to 1897. See? There really isn't anything new under the sun!

The RARS 10 Meter Net Goes Digital!

The RARS 10 Meter net is alive and going strong. The 'interesting' atmospheric ambiance of the HF bands during the summer months has filled the Wednesday evening nets with a warm glow and charm. If you don't believe me tune up your HF rig to 28.364 at 20:30 (or after the completion of the famous 8:00 net called by KF4NIR, which ever is later) on any given Wednesday night. Everyone is invited to join this experiment in local HF propagation. We have recently had checkins from Montana and three stations from Florida one night. One of the Florida stations even followed us to 17 and 75 meters. Even though there is fun to be had for all, the net serves as a forum for practicing HF emergency communications.

In September the 10 meter net will serve a special purpose. As part of the ongoing and widespread effort to evaluate digital modes for emergency communications the 10 meter net will start on 10 meters then switch to PSK31. The date and frequency will be announced prior to the event. We are trying to get as many stations as possible to try this mode in a directed net environment. I will report back with the results. This is only one more extension of the possibilities on the 10 meter net. If you have a suggestion or would like to get experience calling the 10 meter net please send email to kg4hdt@arrl.net.

73s,
John Guerriero KG4HDT

**The Wake County ARES Net meets
Thursday at 9:00 PM on the 146.88
Repeater**



**Join Us At The
RARS Dinner**



**Every 4th Tuesday, 6:30 pm at
Fat Daddy's on Glenwood Ave.**



FCC Enforcement Letters

*The following are documents of local interest from the **FCC Amateur Radio Enforcement Letters Periods Ending July 28 and August 11, 2001**. Please note that these are all publicly available documents, sent by Riley Hollingsworth K4ZDH, FCC Special Council for Amateur Radio Enforcement.*

August 10, 2001

Derek's Trucking
3102 Rockspring Church Road
Creedmoor, NC 27522-1964

SUBJECT: Warning Notice--Unlicensed Radio Operation

Dear Sir:

Monitoring information before the Commission shows that you have been operating radio-transmitting equipment without a license on frequencies in the Ten Meter Amateur Radio Service band. Your truck bearing license plate ZB20189 was monitored transmitting on Ten Meter frequencies on July 19, 2001 at 10:30 a.m. on U.S. 1 near Cary, NC, at 2:50 p.m. on Kildaire Farm Road and from 3:00 to 3:30 p.m. from a landfill near the intersection of State Road 55 and Sunset lake Road. Re-transmissions of Nextel two-way communications were also sent from the truck on Ten Meter frequencies.

Please be advised that operation of radio transmitting equipment without a license is a violation of Section 301 of the Communications Act of 1934, as amended, 47 U.S.C. Section 301, and will subject you to fine or imprisonment, as well as an in rem seizure of any non-certified radio transmitting equipment, in cooperation with the United States Attorney for your jurisdiction. Monetary forfeitures normally range from \$7,500 to \$10,000.

You are requested to contact me at 717-338-2502 to discuss this matter.

July 31, 2001

Mr. Alain P. Foucard
4201 Country Club Road
Morehead City, NC 28557

Subject: Technician Amateur License KF4MIL
Warning Notice

Dear Mr. Foucard:

Information before the Commission indicates that you have been operating on 14.118 MHz, the 20 Meter Amateur Band to check in to the "Reseau du Capitaine" net. This operation has occurred numerous times in May and June, as well as other dates. These frequencies are not licensed to you under your Technician license.

We wrote you about this on June 6, 2000, and we cautioned you that such operation could not only lead to revocation of your license or a monetary forfeiture, but would also jeopardize any future attempts to obtain an upgraded Amateur Radio license.

Section 308(b) of the Communications Act of 1934, as amended, 47 U.S.C. Section 308(b), gives the Commission the authority to obtain information from licensees about the operation of their station. Accordingly, you are requested to respond to this letter within 20 days of the above date.

You may call me at 717-338-2502 to discuss this matter.

PUBLIC SERVICE CALENDAR

For details visit www.rars.org/public-service
or call Bill KG4CXY at 469-0785

MS-150 Bike Tour

September 8th-9th

Contact: Bob Breyer K1RCB
breyer@ix.netcom.com

Familias Del Pueblo Road Race

September 9th

Contact: Ralph Embrey KF4NIR
kf4nir@aol.com

Duke Liver Center Triathlon

September 30th

Contact: Jim Walter KG4FIJ
jwalter@nc.rr.com

Light the Night Walk

September 20th

Contact: Karl Ulrich K4LNX
k4lnx@arrl.net

American Red Cross - NC State Fair

October 12th-21st

Contact: John Guerriero KG4HDT
kg4hdt@arrl.net

**The Central
Carolina Skywarn
Net meets Tuesday
at 9:15 PM
on the 146.88
Repeater**

Field Day Anniversary: The Beginning Of My Personal Adventure

[Editors Note: This would have been better run in the last issue of The Exciter, but it was a crowded one. We present it here for your enjoyment]

As I write this, Field Day 2001 is approaching and with its arrival comes a flood of memories. It was ten years ago as I was programming a new scanner that I stumbled onto the 64 repeater and heard two hams talking about Field Day 1991 coming up in Butner. At the time, I wasn't a ham and had never seriously thought about becoming one. In fact, even though I had owned a collection of Hallicrafters and Hammarlunds from years as a medium wave DXer, I don't recall ever meeting a ham face-to-face. But I knew of the Field Day tradition through reputation and thought seeing one firsthand might be interesting.

Lacking specific information, I called Wake Tech to get information and a location for Field Day Tech (thinking they probably had ham radio classes). While they couldn't help, they did route me to Bob Rinn N4VQN. I phoned Bob and introduced myself and started asking questions. In the best tradition of Elmering, Bob responded to my inquiries with friendly, enthusiastic answers and very detailed explanations, and invited me to visit the Field Day site on the upcoming weekend.

When Saturday arrived, there was surprisingly little happening in the Andrews household, so I invited my 13 year old son Brian to ride with me up to Butner to (in my own description) "watch guys stick antennas in the trees and talk on the radio to other stations around the world."

What I expected to be a short adventure to kill a couple of hours turned into something more, a lot more ... an adventure that has lasted 10 years and I hope is nowhere near completion. At Field Day we were enthusiastically greeted by a group of hams we had never seen before. We visited the novice/tech station, saw handy talkies in action for the first time, learned about computers for logging and packet radio, and saw the HF stations working those stations around the world. All very interesting and impressive, but pretty complicated and intimidating for a first timer. But it was the invitation to stay for a supper of hamburgers and hot dogs that was the real turning point. We had to call home to tell my wife Kit that we wouldn't be home for supper. But how could we do that? It was a long distance call from Butner and we were way out in the woods, nowhere near a phone.

Obviously this was no problem for ham radio operators. Someone pulled out an HT, asked us for our phone number, brought up the 64 repeater and accessed the auto patch. Wow, a miracle of technology; both Brian and I were hooked! We learned that the No Code Tech had just gone into effect



and it would be possible to get a license without learning Morse Code. The key would be getting a copy of the study manual "Now You're Talking." Someone suggested ordering it from AES in Milwaukee.

Again fate intervened, since the next week we were leaving on vacation, flying into Milwaukee no less, to spend the week in Wisconsin. The very same Milwaukee that is the home of Amateur Electronic Supply! Remember that I knew ham radio equipment through catalogs (I spent hours looking through Allied Radio, Lafayette Radio Electronics and Bernstein-Applebee catalogs), but I not only had never met a ham in my youth, but I had never been to a REAL radio store.

As soon as we landed in Milwaukee and picked up the rental car, our first stop was AES. Talk about a kid in a candy store! Beams and dipoles on the roof, HF radios covering the tables and QSLs lining the walls, and HTs of every make and design on display in the cases. I wanted some of all of this!

To make a long story short, Brian and I got our study manual, went to a RARS test session and got our ham tickets by October 1991. For Brian, KD4EWH, his Yaesu FT-411 soon led to interest in packet radio and being featured in the CQ Magazine Packet Radio video series. That fascination in packet led to a broader interest in computers, which matured into a degree from NC State in Computer Science and ultimately a job at SAS Institute as fulltime programmer.

For me it was KD4EWG (Eggs With Grits if you're Southern; Echo Whiskey Golf if you're DX). My adventure over the past decade has been different than Brian's, but equally enjoyable. The No Code Tech license introduced me to all the facets of ham radio and rekindled my interest in DXing and collecting QSL cards. First came the license upgrades to General and then to Advanced. Simultaneously the Hammarlund general coverage receiver was replaced by a Drake HF station, which soon gave way to a Kenwood TS-680 (adding the WARC bands and 6 meters) and a couple of G5RVs. With the changes in license class and equip-

Kelly Andrews KD4EWG
ment, there were other changes.

No, I'm still not much on CW and technically, I'm probably little more than an advanced class appliance operator. But ham radio has made a difference. A renewed awareness of world geography, relearning the countries of Africa and the old Russian satellites. And those two years of high school Spanish that I had never used. Check me out on 20 meters stumbling through a real QSO in Spanish with an IOTA DXpedition for a new South American island. It's the only time I've ever used Spanish conversationally but I can make a contact and confirm the QSO.

While I spend most of my ham radio time on HF SSB chasing DX (270 countries so far on 100 watts phone), I still have the HT and mobile rig and regularly visit the 64 repeater. Unfortunately, we'll be out-of-town on Field Day 2001, but Field Day won't be out of my mind. Ham radio has meant a lot to my family and me over the past 10 years and it all started with Field Day.

So as Field Day 2001 nears, I wanted to take a few minutes and say thank you N4VQN and thank you RARS. Good luck W4DW at Field Day. It's been an unbelievable ten years.

73 de KD4EWG.

**Don't forget
to pick up
your 2001
RARS
membership
card at the
next RARS
Meeting!**

The KD4RAA Repeater Group in Raleigh Launches First NC Internet Repeater Linking Project (IRLP) Node

The KD4RAA repeater group recently activated North Carolina's first node for the Internet Repeater Linking Project on 146.775 MHz. IRLP is a growing cooperative effort linking more than 150 repeaters across North America, Australia and England. Participating repeater owners use full-time high-speed internet access, allowing local users to link to repeaters around the world. Information on IRLP can be found at <http://www.irlp.net>, and global maps of IRLP nodes are at <http://www.ipass.net/~jimprice/irlp/>. The IRLP Linux-based interface and control board is the brainchild of Dave Cameron VE7LTD in Vancouver, British Columbia.

The 146.775 NC4SU repeater is operated by the KD4RAA Repeater Group for the NCSU StARS, W4ATC (<http://w4atc.ncsu.edu>) and is linked to several 440 MHz repeaters operated by the Group. It's on the air from a 350-foot tower west of the North Carolina State Fairgrounds in Raleigh and requires 88.5 Hz tone. Regular coverage extends from Pittsboro and Durham to Smithfield.

How it works:

IRLP allows users to link repeaters via the internet. There are two connection modes -- Direct (one-to-one) and via a Reflector (one-to-many, like a hub). You must use a radio to access IRLP via repeaters -- you cannot connect directly from the internet. Connections are activated using DTMF tones, just like an autopatch.

Direct connect is just like it sounds, where repeater (node) "A" connects direct with node "B". In this mode the two nodes are connected and no other IRLP nodes may connect with them. Direct connections will time-out after 5 minutes of inactivity.

A Reflector is a Linux computer hub that sits on lots of internet bandwidth capable of allowing many repeaters to be connected together by streaming received audio back to all other connected nodes. The most popular IRLP connection in use today is via the Denver Reflector -- at any given time there are usually 6 to 10 or more repeaters around the world interconnected through the Denver Reflector. Other reflectors are hosted in Toronto (Ontario), Saskatoon (Saskatchewan), Yellow Knife (Northwest Territories), and Sydney (Australia). Reflector connections do not time out -- some node owners leave their repeaters connected for long periods of time.

IRLP use differs a bit from conventional FM repeater use -- please familiarize yourself with this new mode before keying your mic. The repeater can be heard around the world and we want to make the best impression possible. As with any linking system, the IRLP is subject to some audio delays caused by the time it takes for data to be compressed and traverse the internet. The most important guidelines to remember are to LISTEN longer before using the node repeater, and to PAUSE after pressing the PTT button and between transmissions to allow for the delays. By pausing between transmissions and before you speak you 1) allow users on other nodes a chance to check in, 2) allow other nodes time to send touch-tone commands to drop their node, and 3) allow time for IDs you may not hear but which are playing on other nodes. For information on IRLP operation see <http://www.musten.com/kd4raa/guide.html>

IRLP Nets:

Every other Sunday an IRLP net is held inviting check-ins from around the world, providing an excellent chance to hear IRLP at its best. With the large number of check-ins and participating repeaters, guidelines have been established to ensure that nets flow smoothly. To participate in the net there must be a local net controller designated by a repeater control op, otherwise you will only be able to monitor. Please refer to the IRLP website for additional information on IRLP nets.

For more information on the Raleigh IRLP node on 146.775 NC4SU, please contact kd4raa@yahoo.com or ww4m@ipass.net

New RTP Repeater On The Air

The N4ZBB 444.675 + (100.0 pl) signs on the air from Hwy 55 and Cornwallis in the Research Triangle Park. Designed coverage area favors the West-SouthWest of the RTP but includes mobile penetration as far as the RDU airport. The repeater will be linked to the KD4RAA-K4JDR repeater linking system and will have the features of the link system including the MTS Weather Alert, autopatch and IRLP internet linking access. Primary participants in the project include: Charles Durst WA4WTX, Danny Musten KD4RAA, Ken Edwards N4ZBB, Ron Casey K4JDR, Harold Henion KF4AUF, Charles Bruckner KG4MXV, and David Thompson. Information on the 444.675 Repeater can be found on the KD4RAA Repeater Group site at www.musten.com/kd4raa.



The 146.775 Tower, with the IRLP node

APRS Testing in New Bern

On Saturday, August 4th, some local hams drove down to New Bern to meet some other local (to there) hams to do some APRS testing for the MS-150, in it's new location.

Participating were Paul KG4HJC, Bob K1RCB, Vince KF4ZMV, Eric KF4OTN, Bruce N8UTY (both from the coast), Gary KN4AQ, Susan K4KTY and Karl K4LNX. Special thanks goes out to Mark WA3JPY for providing the digipeater in New Bern.

The testing was done on WA3JPY's EWNLAN LAN/BBS/Digi on 145.63 (not the standard 144.39 APRS frequency). KG4HJC and KN4AQ drove around the first day's leg of the tour and K4LNX (with K4KTY riding shotgun) drove on the second day's leg of the tour. They also did some testing of the voice repeaters to be used, mostly to check for HT coverage.

Overall, the test was a success. The EWNLAN Digi provided ample APRS coverage for most of the course on lower power, and APRS stations in the fringe need higher power.

Thanks to everyone to helped out!



The cars lined up, ready to roll!



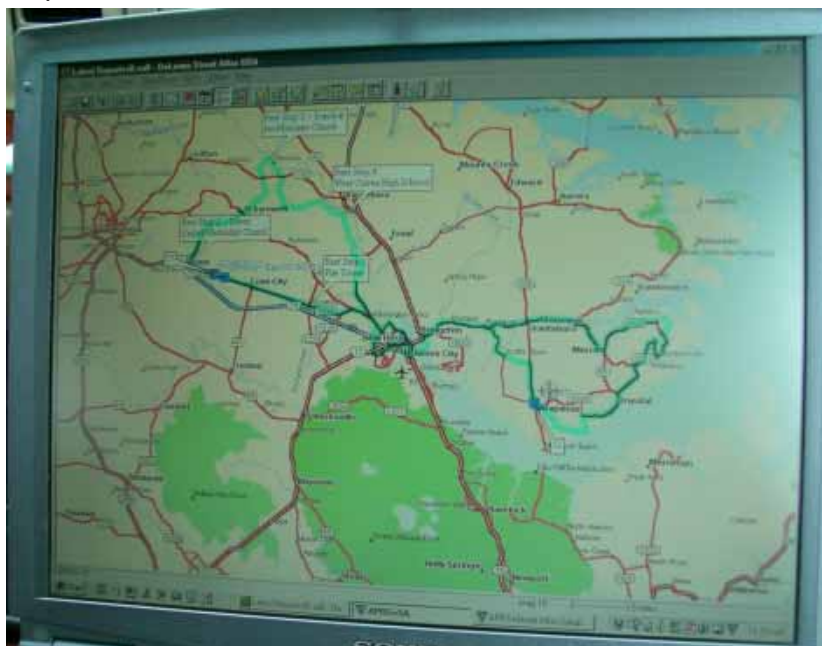
Our MS-150 coordinators, Bob K1RCB and Vince KF4ZMV, already having too much fun.



Eric KF4OTN, Karl K4LNX and Susan K4KTY trying to figure out repeater frequencies and program GPS receivers



Here's the KN4AQ mobile ready for APRS tracking



Here's a closeup of the APRS+SA display for the MS-150

Wake County ARES Digital Review

Gary Pearce KN4AQ, Wake ARES PIO



John Guerriero KG4HDT, EC for North Carolina Emergency Management, starts off the meeting

Amateur Radio digital communications has been around for a pretty long time now.

The modern forms of digital began with packet and the "TOR" modes (Teleprinter Over Radio) back in the 1980's, and older forms



Paul KG4HJC Outlines some of the goals in choosing Digital Modes

like RTTY are well over 50 years old. The potential efficiency of passing messages, both formal and tactical, through text-based, error-correcting digital circuits is undeniable. Multiple networks exist across North Carolina, some more than a decade old (packet BBS, DX PacketCluster, SEDAN, APRS). Many individuals around the Section have lots of digital experience.

And yet Wake County ARES and much of the rest of the NC Section remain firmly entrenched in voice (and a little cw) as the only means of providing emergency communications to our clients in emergency management, Red Cross, etc., and passing health and welfare traffic. A few local areas of North Carolina have implemented some digital operation, but we here in Wake

been developed. And with fast, powerful computers commonplace, new technologies have been built that allow hams to bypass expensive multimode controllers (\$300+) and drive radios directly from computer sound cards, using homemade or inexpensive commercial interface boxes (\$120 for the most expensive commercial units). This rich environment of modes, software and hardware has created opportunities, but also problems - a digital Tower of Babel where there is no common means of connection between all the participants (at least not on Amateur Radio... everyone has Internet based e-mail). Of the 22 hams at the meeting, not all had VHF packet, not all had PSK-31, AMTOR even RTTY.

OK... where to start? Paul Bohne KG4HJC bravely stepped into the spotlight with an outline for progress. Paul had the unfortunate experience of sitting in an ARES meeting earlier this year and stating that his primary interest was digital communications. Wake ARES EC Tom Brown N4TAB asked him to spearhead this investigation. Paul was brave because, while there is little coordination for using digital modes for ARES, there is plenty of emotion. Everyone has favorite modes, programs and devices, promoted because:

- 1- they work "best";
- 2 - I already own it and don't have to spend any more money on it;
- 3 - I already understand it.

It's a minefield, and Paul tread carefully. You can see Paul's outline on the Wake ARES web page - www.wakeares.org. Before you get too mad, remember that it's a starting point, not the mandated solution.

GOALS

He began by outlining a few goals. We would not attempt to duplicate or replace voice networks. Rather, we would take advantage of digital's unique capabilities to send data quickly and accurately in a ready-to-print or ready-to-database format. This includes things like providing fallback support for the "EM-2000" messaging system used by emergency management at both the state and county level, creating a channel for passing messages between local HF liaison stations and the State EOC, and handling high volume health and welfare traffic in the event that large numbers of evacuees arrive in Wake and surrounding counties from the coast. Wake County ARES is looking for solutions to use within the county, but our quest has already attracted attention from around the Section, and we are excited to include the rest of the Section in the discussion. We are not positioning ourselves as the experts (though there is much expertise here). We are happy to be opening a discussion channel that we hope will lead to Sectionwide solutions that can be implemented before the next hurricane season.

Moving on in Paul's outline, he listed concepts for using digital communication. A key concept is understanding that there are many more hams equipped for and capable of voice communication than there are equipped for digital. Digital should supplement voice, but all ARES operators will be encouraged to add digital capability, both hardware and skills. But which capability? Which mode, what hardware, what software, and how will they learn? Stepping on Land Mine #1, Paul suggested that ARES recommend a limited set of modes, hardware and software. We're not saying WHAT modes, hardware and software right now, but we recognize that we will need interoperability, and at least some hams will want clear guidelines on what to buy and set up. With that in place, it will be possible to provide training.

Some of the hams in the meeting were concerned that we were going to impose required standards. And that is true in the sense that if we choose Modes A, B and C, you won't be part of the network if you use Mode D. On the other hand, if we recommend software program S and hardware H, but you want to use software W and hardware X, that will be fine, as long as you can communicate with the rest of the network. We just won't be able to help you solve problems as well. You'll be more on your own to make your system work. And you won't be as prepared to sit down at an EOC and



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Tom Brown, EC for Wake County, Leads the Discussion

compatibility, error-free delivery, reasonable throughput, compatibility with existing EOC radios, low cost, easy setup, and compatibility with EOC computer systems. Extra credit given for binary file transfer, image transfer, and open standards with multiple sources for equipment.

DECISIONS - Making the First Cut

Time to draw some lines in the sand. Paul listed nineteen more or less distinct digital modes, from RTTY, AMTOR and PACTOR to PSK-31, Hellscriber and ATV. Can we scratch any off the list right away?

Yes (Land Mine #2 looming dead ahead). Goodbye CW, RTTY, AMTOR, PACTOR, PACTOR-II, CLOVER/II/2000, G-TOR, Fax, Hellscriber, SSTV and ATV. They're not robust enough, too expensive, proprietary or limited. Everyone held their breath for the died-in-the-wool CW op to object, but none did (yet). AMTOR was the only mode lifted from certain doom for further consideration, based on the amount of use (mostly by MARS). This doesn't mean these modes have no utility - just that they're not under consideration for routine, widespread implementation. Some of them certainly have specialty uses.

What does that leave in the first cut to test? The new, inexpensive HF modes with good weak-signal performance: PSK-31, MFSK and MT63. Several forms of VHF Packet (APRS, SEDAN and the BBS network). And perhaps WinLink, which is actually a PACTOR based gateway between Amateur Radio and Internet e-mail (several people mentioned that there are other solutions for that capability). APRS, a fair-haired child said to have rescued Packet from Internet-caused obscurity, was discounted for its weak message handling. SEDAN and the BBS Network got some positive comments, along with questions about how extensive the network is in North Carolina. No one mentioned the DX PacketCluster - no one was familiar with it - though it does have "emergency mode" capability and an extensive in-place network.

TESTING, One-Two-Three

Again, these are not the chosen few, the anointed modes. Not yet, anyway. Next, we test. Give 'em a try. Wring 'em out. See if they do what we think we need them to do in as real-world simulations as we can devise. We'll need individuals who already have the hardware/software or are willing to get it, know how to use it, and can test and document it. A Test Coordinator will receive these results and publish them on the web site.

Finally, we will end up with a set of recommendations, and we'll need to

operate the program in place on the computer there. We will recommend some specific hardware and software for both individual stations and the EOC stations, and support it with training on the air and on the web site.

Finally, Paul noted that we need a good way to translate between digital formats and NTS message format. This is to allow a flexible flow of information between the various modes of Amateur Radio transmission (voice, cw, data), our client's systems (EM2000), and databases for archiving and retrieval. Later in the meeting, Mark Gibson N4MQU demonstrated a program he developed that helped format NTS messages for text-based digital delivery.

Next, Paul listed what he saw as required capabilities for any digital mode. He included things like statewide coverage, NTS traffic

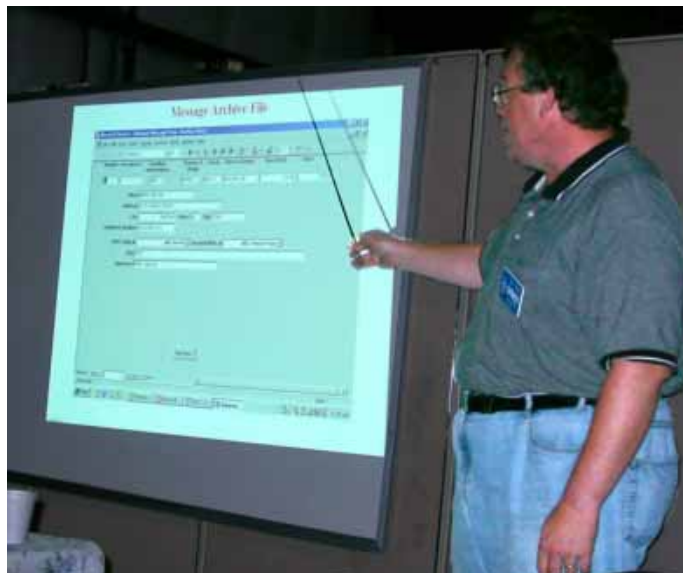
implement them. Get hardware and software installed at the EOCs. Help hams get their own equipment going. And everybody get up to speed using it. By next June. Sounds simple enough....

MAILING LIST CREATED

A new mailing list will help with all of this. The list - ncares-digital@rtpnet.org - is designed to let everyone in the Section join in the discussion, from ripping to shreds everything we've said in this article so far, to coordinating tests and disseminating results. And once we have agreement on some modes and hardware, the list will be a tool for training and keeping up with progress (what, you thought nothing new will be invented?). Subscription instructions are on the Wake County ARES web page, www.wakeares.org.

Wake County EC Tom Brown N4TAB concluded the meeting by emphasizing that this is a beginning. If you weren't at the meeting, you're not too late. We expect some furious discussion, but also some hard work testing, poking and prodding these modes to see what they can do. We expect some question and analysis of just what jobs we really should be trying to do, and where digital really belongs in the overall scheme of ARES communication.

How did we get to 2001 without answering these questions, without putting this in place already? A better question is: how do we get to 2002 without having to ask the questions again.

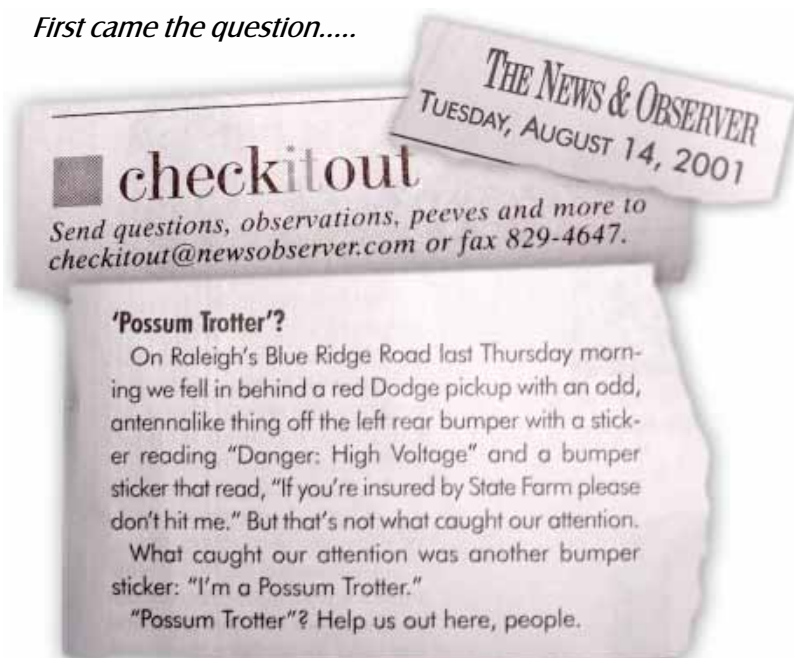


Mark Gibson N4MQU, Wake ARES AEC, Demos His Message Translation Program

Local Possum Trotter Makes the News!

A few weeks ago, Gary KN4AQ (and other hams) found these articles in the News and Observer. We're sure many of you can guess who the ham being described here is: it's Max KO4TV (see his article on page 3)
Congratulations Max!

First came the question.....



<http://pages.intrstar.net/~ptnet/>

2E

checkitout

Send questions, observations, peeves and more to checkitout@newsobserver.com or fax 829-4647.

Possum Trotters: The true story

Were we the only ones who didn't know what a Possum Trotter was?

Well, maybe not the only ones.

David thought the bumper sticker we recently saw might refer to someone from Possum Trot. ("Think 'Beverly Hillbillies'," he advised, then added "Just be glad you're not from Lizard Lick!") And Ronald from Garner gave the topic way too much thought, suggesting it might describe anything from golfers at the Possum Trot Golf Course in Myrtle Beach to firemen with the Possum Trot/Sharpe Fire Department in Calvert City, Ky. (He also passed along a recipe for Possum Pot Pie, if anyone is interested.)



But as everyone from AK4W to W4VFJ let us know, Possum Trotters are a group of 1,000 ham radio operators in North Carolina. Actually, not just in North Carolina, but in 49 states and 15 foreign countries.

As AK4W (or "Ed") explains, the Possum Trotters convene on the airwaves every morning between

5:30 and 7 a.m. (tune your ham scanner to 147.225 MHz if you want to listen in). "People check in around the state, and if you officially join the group, you are assigned a Possum Trotter membership number."

How does one gain entry into the Possum Trotters' inner sanctum?

"The way to become a member," reports Tiffany from Willow Spring, "is to check in on the repeater five mornings in a row, then all members are to climb up on a stump, face south and sing 'Dixie.'"

Membership has its burdens. "One of your responsibilities," adds Tiffany, "is that when you see a squashed possum on the road you are to stand over it, with your hand on your heart and observe a moment of silence." W4VFJ (aka "Charlie") says members also feed "sky warn" data to the National Weather Service during bad weather.

So why "Possum Trotters?" Perhaps "the code of the possum" best explains: Walk softly and wear a big grin.

A few days later, **CheckItOut** discovered that a lot of hams read the newspaper! Hey, where can we get one of those cool helmets?

Minutes

Club Meeting, August 7th, 2001

The regular meeting of the Raleigh Amateur Radio Society was held on August 7, 2001 at the Forest Hills Baptist Church on Clark Avenue.

The meeting was called to order at 7:36p by Vice President Bob Breyer, K1RCB who welcomed 44 members and 5 guests.

Greg, KE4PAX gave the treasurer's report. He said that our membership stands at 240.

Bob announced the following on behalf of KG4HDT: There will be an ARES drill on Tuesday, August 14. Interested persons were directed to email John at kg4hdt@arrl.net. Also, there will be a meeting at the State EOC on August 23 at 7:00p to discuss recent ARES activities.

Bob then said a few words asking for support of the MS-150 public service event. The start, stopover, and finish point will be the convention center in New Bern. Lots of other statistical facts were covered also, including camping, the frequency plan, APRS, and net control. He asked for volunteers, and for anyone interested to contact him by email, or telephone.

At 7:55p, Bob introduced the program for the evening: Public Service, presented by Bill, KG4CXY.

Vice President Breyer made a few comments on Bill's presentation.

Door prizes were awarded to: K4LNX, AB4OZ, KG4FIQ, KE4EMY, KG4OPZ, and KG4JFB.

The meeting adjourned at 8:46p.

Jeff Wittich AC4ZO, Secretary

said that the nets are going quite well. He has welcomed KG4CXR as the NCS for the Friday night Rars Two Meter Net. KG4CXR mentioned some specifics about the Women's net, and how it has helped some individuals along. Also, the Women's net may soon be moving to 146.775 MHz.

KG4CXY then said a few words about Public Service.

The Board welcomed Joe, WA2UZO to the position of Web Manager. He gave a report on his transition into the position, and said a few words about what is to come.

KG4CXR reported on the Membership Services committee. She thanked Greg, KE4PAX for his assistance in sorting out the membership status of members. She has done lots of work in the area of membership cards, and has had very few problems. The response on the cards has been favorable, and they have been well received.

K4HM gave the hamfest report. The financials were presented, and the short term plans were stated. There are several meetings coming up between key members of the hamfest committee, and several positions have been filled with new personnel.

Old Business:

AC4ZO presented the RARS White Sheet for the approval of the Board. On motion by AB4OZ, seconded by K4HM, the document was approved, and accepted to be our official statement of purpose.

K4HM brought up the new storage facility. The status was described, and the equipment at the old (NA4G) location was discussed. The disposition of the equipment will be handled at another meeting.

AB4OZ addressed the situation with the education department. Specifically, several sets of books had been ordered for donation to local libraries. In view of the circumstances, Alan has paid for the books himself and will handle the donations himself.

New Business:

The issue of Club dues came up. KN4AQ distributed some financial data concerning the Exciter. There was a tremendous amount of discussion, and finally the issue was tabled until the August meeting.

Tracking of RARS owned equipment, and specifically repeater equipment was the next topic on the agenda. The current status was described, and the need for a new process was illuminated. KE4PAX will begin the inventory process by reviewing his records. He will then work with W4BRB to assemble the required inventory.

Announcements and Board Member Comments

W4BRB suggested that we start thinking about a 5 year plan.

KE4PAX wants a list of recurring RARS events. AC4ZO will supply the list.

KN4AQ reported that he had fun at Field Day.

With the business complete, on motion by AC4ZO, the meeting adjourned at 10:08p.

Respectfully submitted,

Jeff Wittich, AC4ZO - Secretary

Board Meeting, July 17th, 2001

Minutes of the RARS July Board Meeting - July 17, 2000

The monthly Board meeting of the Raleigh Amateur Radio Society was held at the Forest Hills Baptist Church on July 17. The meeting was called to order by President Tim Nicholson KF4RTX at 7:39p. Members present at that time were: KN4AQ, KG4CXY, K4HF, K4HM, AB4OZ, KE4PAX, K1RCB, KF4RTX, N4YRD, and AC4ZO. The total attendance was 14.

On motion by KN4AQ, seconded by KG4CXY, the minutes of the May meeting were approved.

KE4PAX gave the Treasurer's report. He said that membership stands at 228.

In the Vice President's report, KF4RTX reported on behalf of the VP. He said that the meeting will cover the MS-150 and a discussion of future programs. Bill, KG4CXY is concerned about having a Public Service event the topic of a RARS meeting.

Committee Reports:

KN4AQ reported on the FM committee. Progress has been stalled on the new repeaters because of Field Day, and a grounding issue at the Bayleaf site. Also, since we are in a new fiscal year, it's time to order the other required 440 machine, and a 220 repeater. W4BRB had this to add: Alltel has perhaps turned over tower management to a third party. We have been invoiced, and directed to wait before doing anything concerning the grounding of our site until new procedures have been implemented by the third party.

K4LNX reported on the Exciter. He has successfully published the July issue, and had a few questions about how to handle some minor issues. They were handled at this point, and nothing was added to New Business as a result.

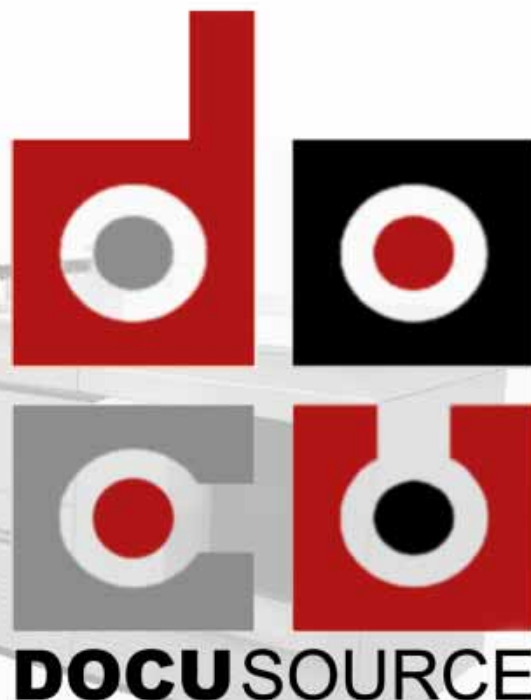
KG4CXY gave the Net Manager's report. He

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Snapshots

On The Cover:

Looking straight up from the bottom of the Alltel tower at our Bayleaf site.



Here is a more frequently seen view. If you drive the new I-540 beltline, you see this tower right on the edge of the highway, between Six-Forks Rd. and Creedmore Rd.



Mike Murphy WA4BPJ has been working on grounding at the Bayleaf tower. Here he's pounding in two 8' ground rods, and drilling holes on a panel that will hold the PolyPhaser lightning protection. The project will be finished soon, and we look forward to the return of the 444.525 and 224.64 repeaters.

Hamfest Calendar

Sept 1: Shelby
Sept 22-23: Virginia Beach
October 6: Rock Hill, SC
November 10: Myrtle Beach
November 18: JARSFEST



Courtesy of the SERA Repeater Journal

